U.S. Army Accessions Command
First Handshake to First Unit of Assignment

Regular Army Enlisted Attrition Overview

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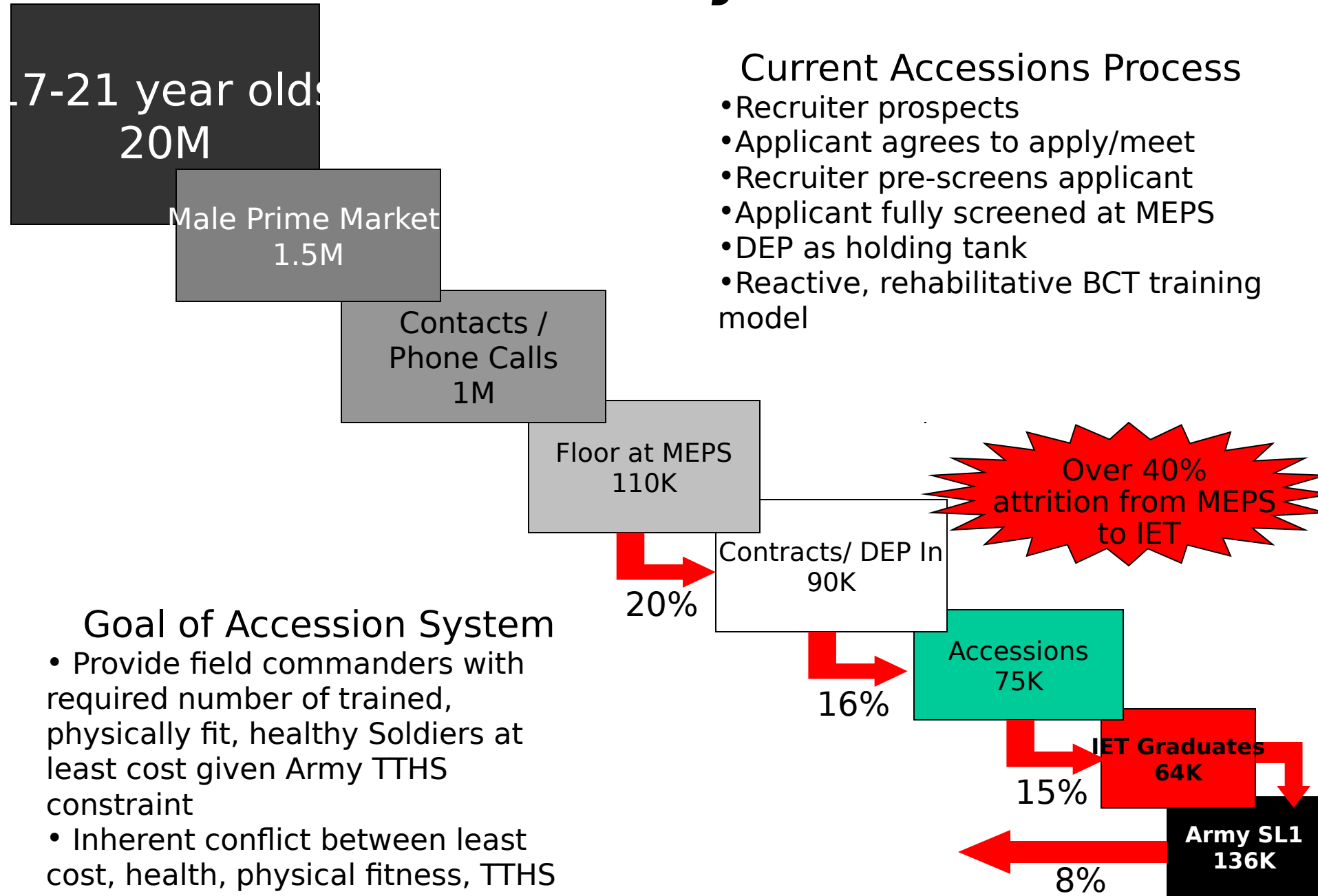**Accessions Research Consortium**

27-29 January 2004

Purpose & Agenda

✴ Provide overview of RA enlisted attrition to familiarize general audience

✴ Agenda

➡ Enlisted accessions system & attrition

☐ Youth recruiting market

☐ DEP attrition

☐ IET Attrition

☐ 1st Term Unit Attrition

☐ Attrition research & attrition reduction personnel policies

Enlisted Accession System & Attrition

17-21 year olds
20M

Male Prime Market
1.5M

Contacts /
Phone Calls
1M

Floor at MEPS
110K

Current Accessions Process
- Recruiter prospects
- Applicant agrees to apply/meet
- Recruiter pre-screens applicant
- Applicant fully screened at MEPS
- DEP as holding tank
- Reactive, rehabilitative BCT training model

Over 40% attrition from MEPS to IET

20%

Contracts/ DEP In
90K

Goal of Accession System
- Provide field commanders with required number of trained, physically fit, healthy Soldiers at least cost given Army TTHS constraint
- Inherent conflict between least cost, health, physical fitness, TTHS

16%

Accessions
75K

IET Graduates
64K

15%

Army SL1
136K

8%

Interesting "Facts" about FY03 College Freshmen (Class of '07)

- They were born in 1985.
- Iraq has always been a problem -they were 5 years old when the Persian Gulf war was fought.
- Afghanistan has always been a front page story.
- Russian leaders have always looked like leaders everyplace else, and the US and the Soviets have always been partners in space.
- An automatic is a weapon, not a transmission.
- The Army has always driven Humvees.
- Pete Rose has always been a gambler.
- Killer bees have always been swarming in the US.
- There has always been some association between fried eggs and your brain.
- Bert and Ernie are old enough to be their parents.
- There has always been a screening test for AIDS.
- They have always been able to make photocopies at home.
- Computers have always fit in their backpacks, "Ctrl+Alt+Del" is as basic as "ABC."
- They never heard Howard Cosell call a game on ABC.
- The Osmonds are just talk show hosts.
- Test tube babies are now having their own babies.
- Datsuns have never been made.
- Gas has always been unleaded.
- Rock and Roll has always been a force for social good.

Recruiting Prime Market

* Total Target Population Size: 19.6M 17-21 yr olds & 30.6 M 22-29 yr olds.   (50-50% male/female split)
    * Educationally Qualified Population: 16.8M 17-21 yr olds &   24.0M 22-29 yr olds
    * Qualified Military Available = non-high school drop-outs
* Projected Growth: By 2008 17-21 yr old pop will   increase by 1.2M (+6%) & 22-29 yr old pop will
                        increase by 2.7M (+9%)
    * African American market grows slightly
    * Major growth in Hispanic market
    * Caucasian market decreases slightly.
* Prime Market: educational, aptitude,   moral, medical qualified
* Although target population   is growing, more youth
                    are continuing to
                        propensity is declining

Male Prime Market 1.5 Million

Total Target Populations

Age 17-21   Age 22-29

Male Prime Market

Medically or Morally Disqualified
23%

Incarcerated 2%

Prime Market 15%

15% In College

In Military or PS 4%

41% Non-HSDG Or <TSC I-IIIA
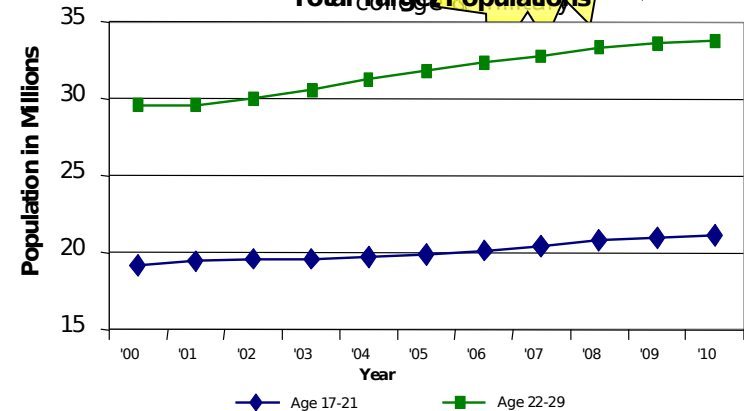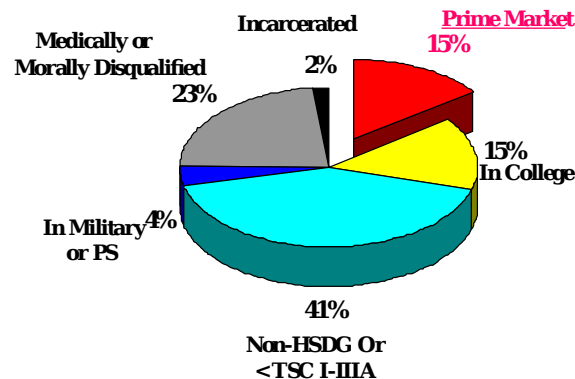
Propensity for Active Duty Military Service (16-24 yrs old)

52   9-11   Iraq Build-up   52

Definitely Not

36   34

Probably Not

9   10

Probably

2   *Definitely*   3

Q2 '01 Q3 '01 Q4 '01 Q1 '02 Q2 '02 Q3 '02 Q4 '02 Q1 '03 Q2 '03
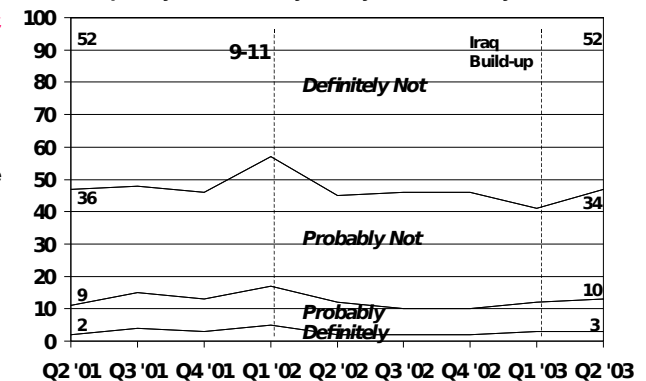
Demographic & Psychographic Profile of RA Enlisted Applicant

FY03 Demographics

* Total Contracts: 92,613
* Male (80.0%)
* White (64.7%)
* African Am (16.4%)
* Hispanic (13.4%)
* API/Other (5.4%)
* Single (83.2%)
* Seniors (18.7%)
* Average Age: 21.3 yr
* Education: 12.2 yr
* TSC I-IIIA: 73.7%
* Average AFQT: 61.8
* Average GT: 107.7
* Term: 3.88 yr
* Contracted Time In DEP:

    4.6 mo

FY02 Psychographics

* Most important motivation to enlist:
    * Serve my county (32%)
    * Skills (23%)
    * Adventure (17%)
    * Benefits (8%)
    * Pay (4%)
* Highest degree you will obtain:
    * Masters or PhD (30%)
    * Bachelors (30%)
    * Associates (6%)
    * High School (6%)
    * Undecided (23%)
* Has anyone you've known served in the military:
    * Father (38%)
    * Mother (4%)
    * Friend (41%)
    * Uncle/Aunt (54%)
    * Grand-parent (57%)
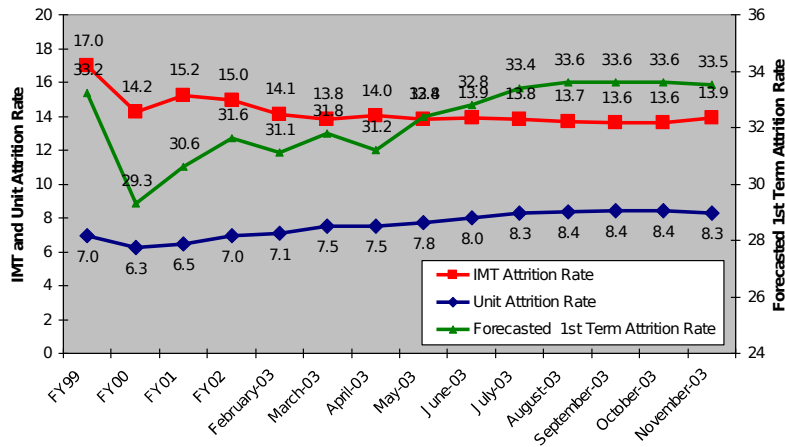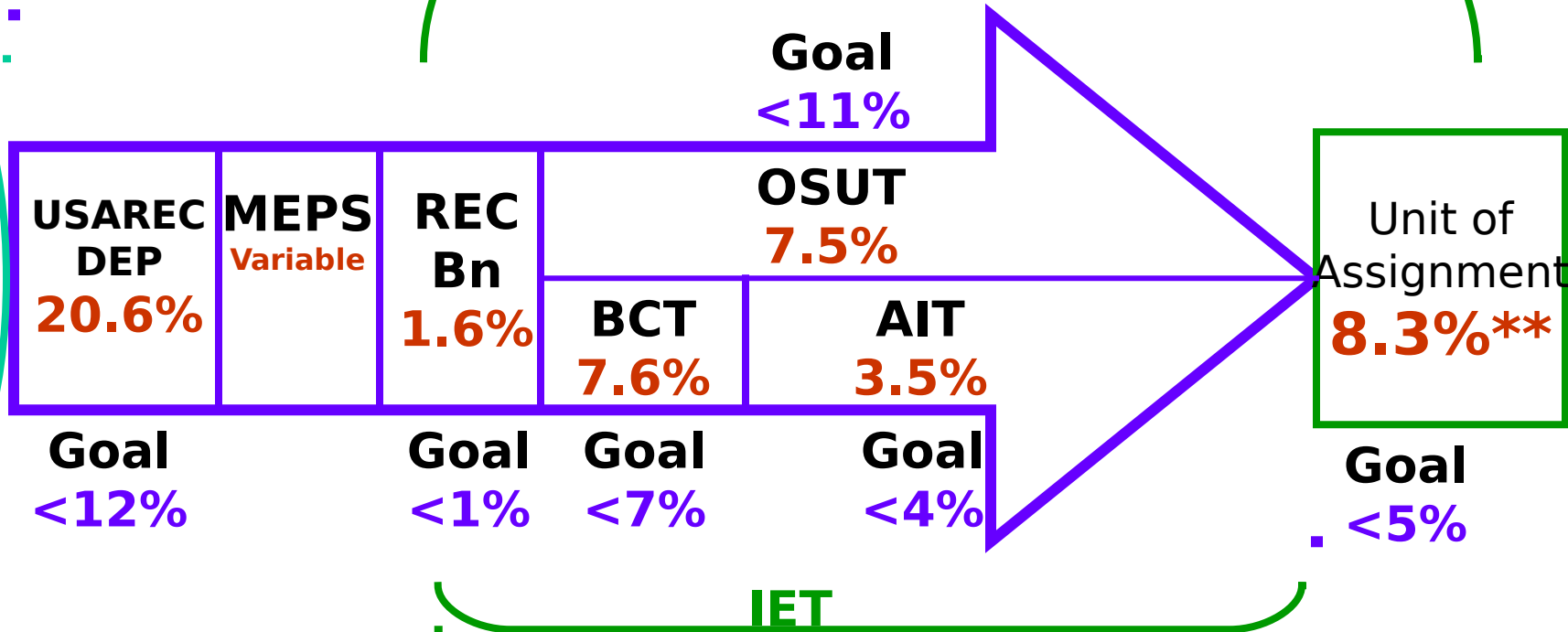   * Sibling (14%)

1st term Active Component Attrition

Volunteer

| USAREC DEP **20.6%** | MEPS **Variable** | REC Bn **1.6%** | OSUT **7.5%** | | Unit of Assignment **8.3%**** |

Goal <11%

| | | | BCT **7.6%** | AIT **3.5%** | |

Goal <12% **Goal <1%** **Goal <7%** **Goal <4%** **Goal <5%**

IET 13.9%*

Goal <12%

Attrition

* 12 Month Moving Average as of No...
** 12 Month Moving Average as of O...

Chart data — IMT and Unit Attrition Rate / Forecasted 1st Term Attrition Rate:

Forecasted 1st Term Attrition Rate: 33.2, 29.3, 30.6, 31.6, 31.1, 31.8, 31.2, 32.0, 32.8, 33.4, 33.6, 33.6, 33.6, 33.5

IMT Attrition Rate: 17.0, 14.2, 15.2, 15.0, 14.1, 13.8, 14.0, 13.8, 13.8, 13.8, 13.7, 13.6, 13.6, 13.9

Unit Attrition Rate: 7.0, 6.3, 6.5, 7.0, 7.1, 7.5, 7.5, 7.8, 8.0, 8.3, 8.4, 8.4, 8.4, 8.3

Legend:
- IMT Attrition Rate
- Unit Attrition Rate
- Forecasted 1st Term Attrition Rate

X-axis: FY99, FY00, FY01, FY02, February-03, March-03, April-03, May-03, June-03, July-03, August-03, September-03, October-03, November-03

Delayed Entry Program (DEP) Attrition

- FY03 19.5% and increasing
  - 92K RA contracts
- Near-term forecast
  - 20-21%
  - Increased from 13% in FY01
  - Primarily due to longer Time-in-DEP and higher quality contracts
- Most likely attrition reasons:
  - Decline Enrollment (35%)
  - Positive THC (13%)
  - Medical Disqualification (7%)
  - Fraudulent Enlistment (7%)
- Correlated to DEP attrition
  - Time-in-DEP
  - Gender
  - HSDG (education Tier)
  - TSC (AFQT)
  - Unemployment Rate

Pie chart:
- Misc. 19%
- Declined Enrollment 35%
- Fail to Grad HS 4%
- Weight Standard 5%
- Hardship 5%
- Moral/Legal 5%
- Fraudulent Enlistment 7%
- Medical Disqualification 7%
- Positive THC 13%

Line chart — DEP Attrition Rate vs Contract RSM (Oct-97 to Oct-03):
- 12 month Avg Forecast DEP Attrition Rate
- Monthly DEP Attrition Rate
- 12 month Avg DEP Attrition Rate
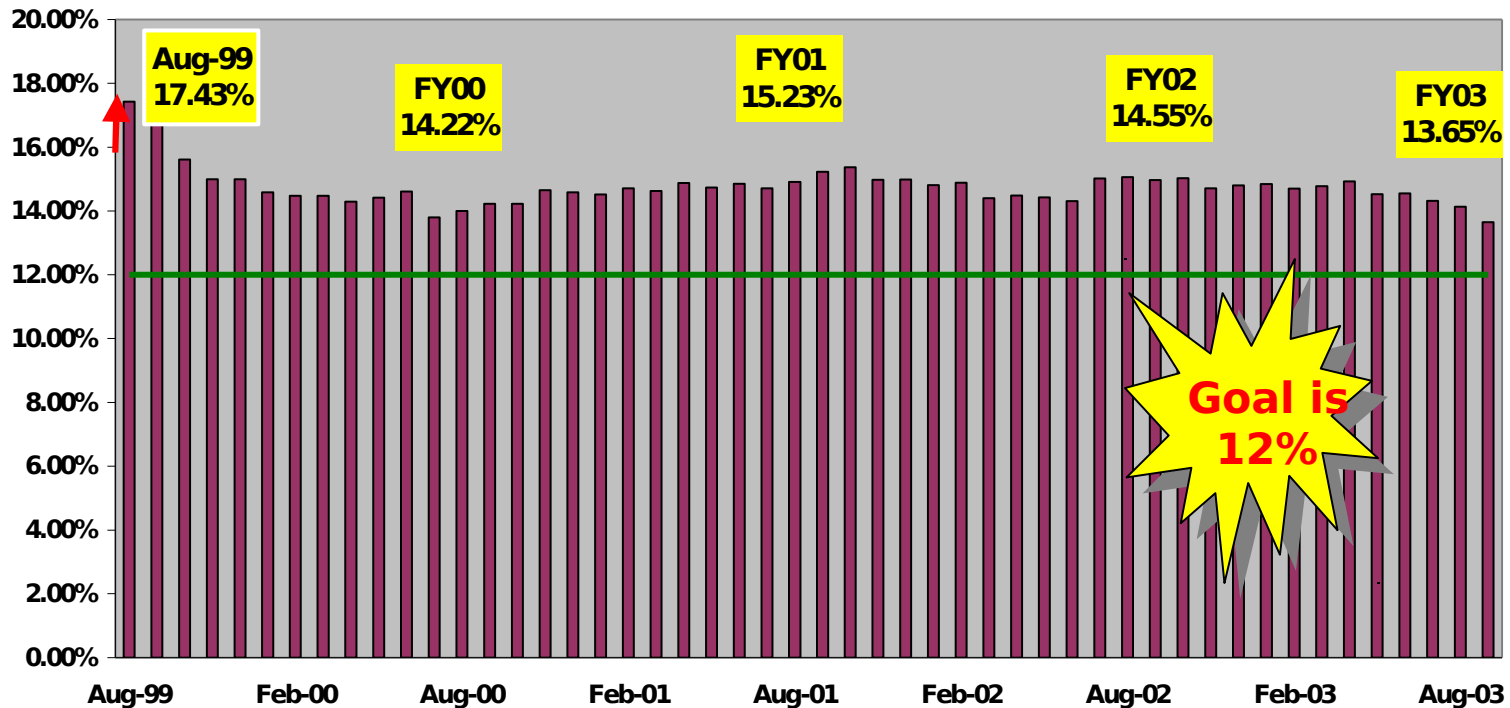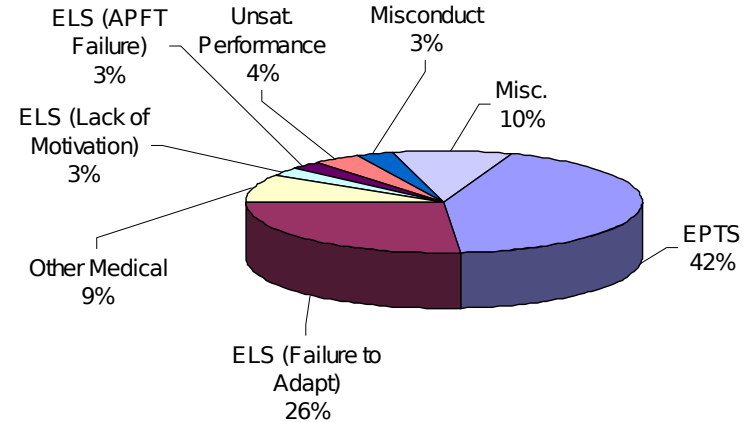- Monthly Forecast DEP Attrition Rate

Annual Training Base Attrition

- ✳ FY03 13.7% and decreasing
  - ➥ 71K Reception BN inputs
- ✳ Most likely attrition reasons:
  - ☐ EPTS (42%)
  - ☐ ELS (Failure to Adapt) (26%)
  - ☐ Other Medical (9%)

Pie chart labels:
- ELS (APFT Failure) 3%
- ELS (Lack of Motivation) 3%
- Unsat. Performance 4%
- Misconduct 3%
- Misc. 10%
- EPTS 42%
- ELS (Failure to Adapt) 26%
- Other Medical 9%

Bar chart annotations:
- Aug-99 17.43%
- FY00 14.22%
- FY01 15.23%
- FY02 14.55%
- FY03 13.65%
- Goal is 12%

X-axis: Aug-99, Feb-00, Aug-00, Feb-01, Aug-01, Feb-02, Aug-02, Feb-03, Aug-03

Regular Army IET Attrition Risk Profile
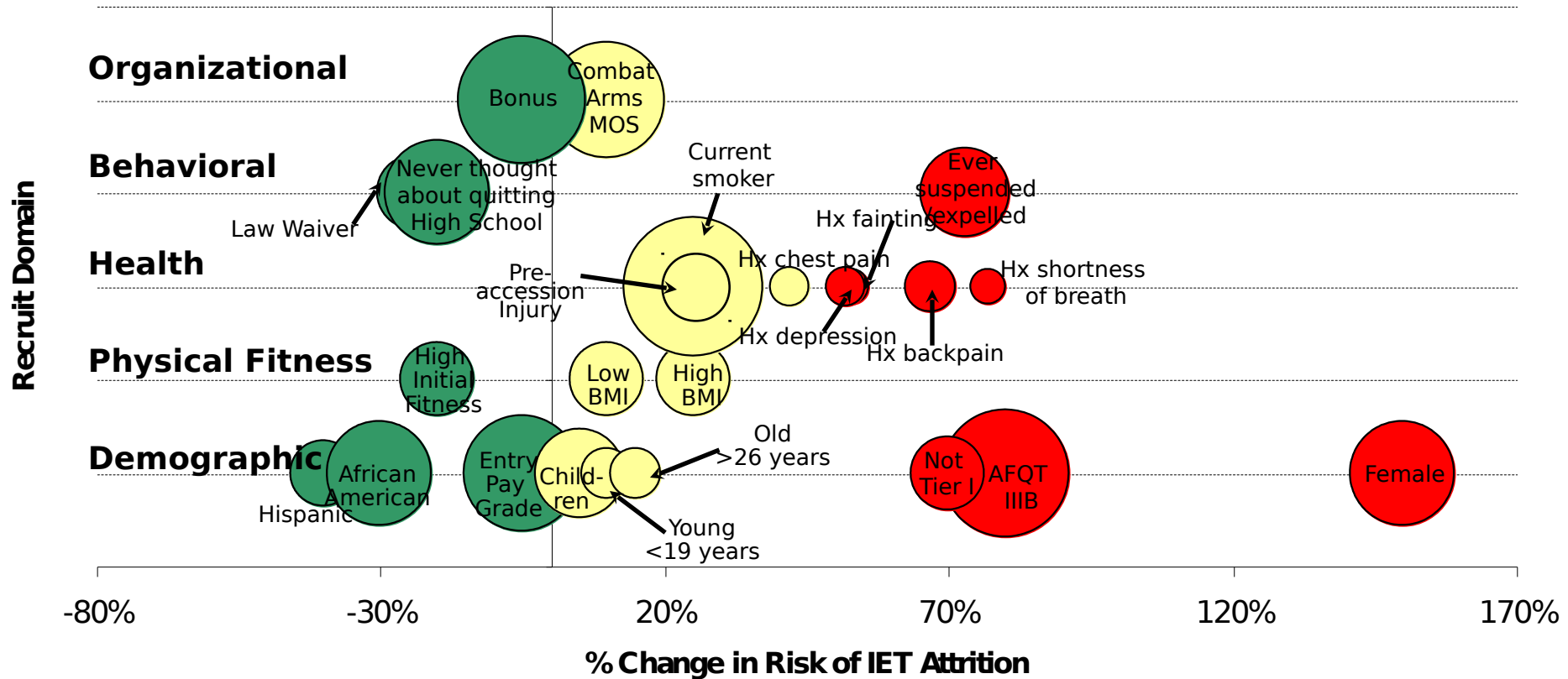
- Base-case IET attrition risk is 15%
- Bubble size is relative to size of RA enlisted accession population
  - Not Tier 1 (10%)
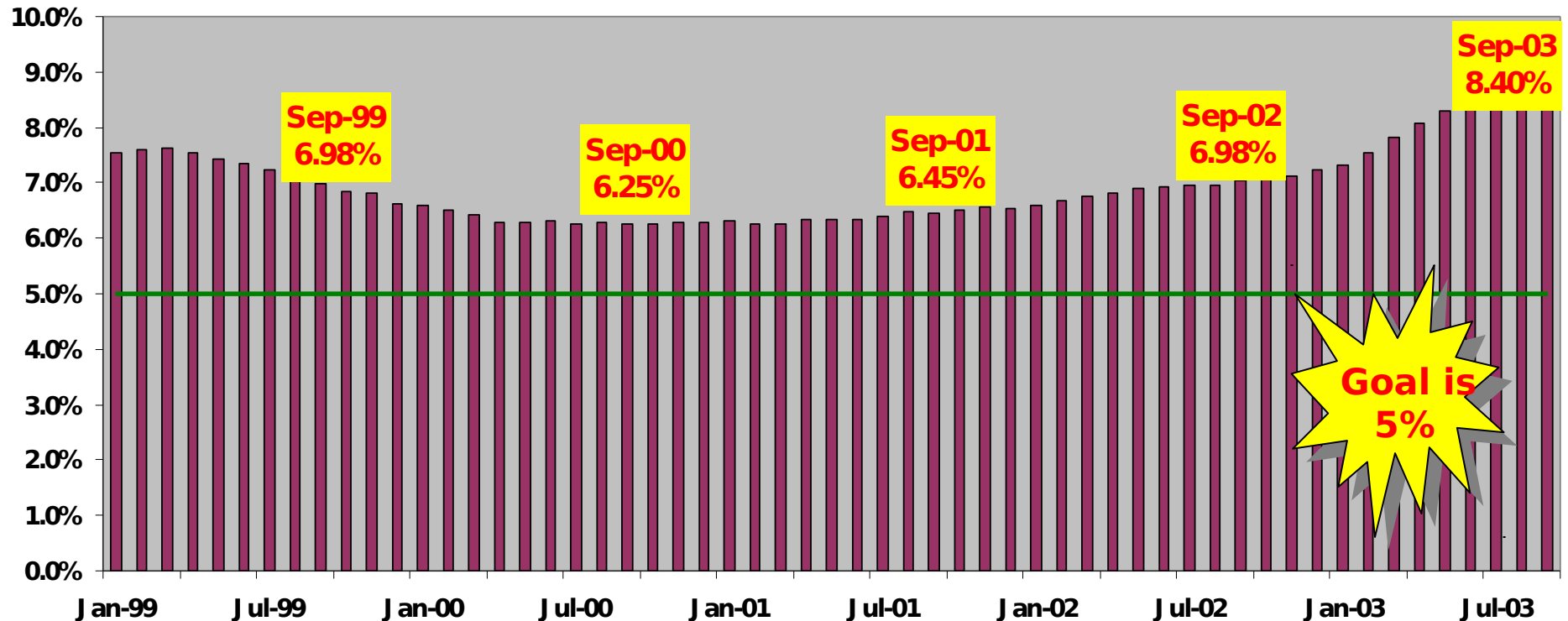 - Female (20%)
  - AFQT IIIB (30%)

Annual 1st Term Unit Attrition

* FY03 8.4% and decreasing
  * 136K avg. 1st term unit operating strength
* Most likely attrition reasons:
  * Misconduct (38%)
  * Pregnancy (9%)
  * Physical Disability (9%)

Pie chart labels:
- Personality Disorder 5%
- Misc. 23%
- No CM/Good of Service 5%
- Misconduct 38%
- Parenthood (Involuntary) 5%
- Physical (not disability) 6%
- Physical Disability 9%
- Pregnancy 9%

Bar chart labels:
- Sep-99 6.98%
- Sep-00 6.25%
- Sep-01 6.45%
- Sep-02 6.98%
- Sep-03 8.40%
- Goal is 5%

Y-axis: 0.0% to 10.0%
X-axis: Jan-99, Jul-99, Jan-00, Jul-00, Jan-01, Jul-01, Jan-02, Jul-02, Jan-03, Jul-03
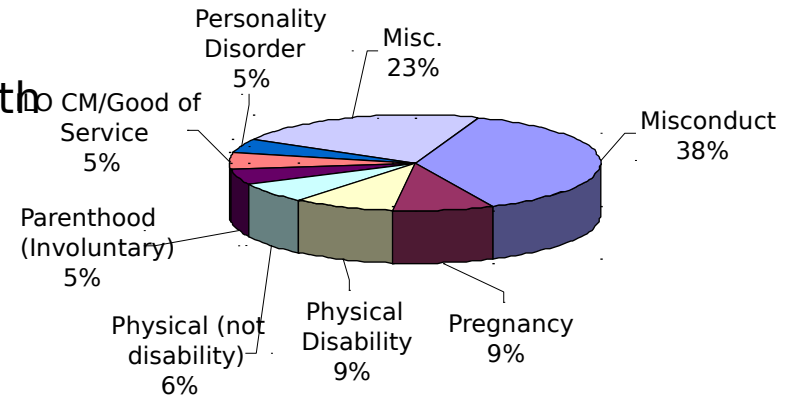
Attrition Reduction Policy Course Of Action Framework:
Mix of screening, assessment & interventions

Inter-vention

- Pre and post training
- Dual track BCT (long & short training tracks)
- Basic skills education
- Coping skills / decision making training
- Occupational Therapy
- Social work services
- Focused PT

- Assess attrition & training risk of remaining soldiers

Assess **Screen-in**

Pre-accession Screen

Class-ification

- Limit enlistment MOS for high risk applicants
- Limit time of year high risk applicants can assess--2d/3d quarter

Screen Out

- Tighten current screens--fewer admin. waivers, more TSC A, fewer non-HSDG
- Develop new screening tools--physical fitness, psychological, asthma, ortho
- Screen non-HSDGs w/ AIM
- In future, possibly screen out highest risk applicants

Attrition

Any screening or training attrition reduction policies will require resources ($, personnel, time, TTHS)--*no free lunch*

Attrition Research & Attrition Reduction Personnel Policies: DEP

✳ DEP Attrition Research

➡ Pre-accession Physical Fitness screen (CHPPM)

▢ Assessment of Recruit Motivation & Strength (ARMS) Study (AMSARA)

▢ Descriptive & prescriptive DEP attrition models (CAR/USAREC)

✳ DEP Attrition Reduction Personnel Policies

▢ DEP training program (USAREC)--*strategic shift*

▢ DEP Physical training Program (USAREC &USAPFS)

▢ 1-1-1 APFT Pre-accession Physical Fitness Screen (USAREC)

▢ DIVT (IT) assistance to DEP

▢ DEP forgiveness policies (USAREC)

▢ Managing contract quality by opening/closing recruiting categories (limited categories)

Attrition Research & Attrition Reduction Personnel Policies: IET

* IET Attrition Research
  * FY03 Cohort Attrition Study (ARI)
  * FY99 Cohort Attrition Study (ARI)
  * High School Degree Graduate Pre-accession Screen study (ARI)
  * Evaluation of TRADOC Standardized Physical Training Program (CHPPM)
  * Dual-track BCT
  * Adverse Childhood Experiences-Recruit Assessment Program (RAP-ACE)

* IET Attrition Reduction Personnel Policies
  * Implement TRADOC Standardized Physical Training Program (o/a Mar '04)
  * Review current BCT POI & develop future BCT POI
  * APFT failure hold-over policy
  * ASVAB re-norming
  * Implement production test of AIM Non-HSDG screen

* Management & coordination actions
  * USAAC IET Attrition Working Group (AWG) --3-5 Mar '04
  * Human Dimensions Lab (HDL) at Ft Jackson

Attrition Research & Attrition Reduction Personnel Policies: 1st Term Unit

* **1st Term Unit Attrition Research**
  * FY99 Cohort Attrition Study (ARI)

* **1st Term Unit Attrition Reduction Personnel Policies**
  * Buddy team Assessment Program (BTAP)
  * Revised Deserter policy
  * Improve soldier's overall job satisfaction & quality of life in areas such as: barracks/housing improvements, strong unit command sponsorship programs, and childcare improvements.
  * Encourage soldiers' participation in the Better Opportunities for Single Soldiers (BOSS) program.
  * Education programs: Army values, benefits of completing enlistment.
  * Mandatory Training: Safety & Accident prevention, Suicide prevention, Substance Abuse program.
  * ARM/CARR: Commander's attrition Programs

* **Management & coordination actions**
  * G-1 Unit Attrition Working Group (AWG)

Questions?

Back-ups

Individual DEP Attrition Model

✳ Base case: male, Caucasian, single, GMA, Tier 1, 2 months Time in DEP, contracted second week of RSM in 2d quarter, 1st Brigade

✳ Base case DEP attrition probability: 12%

✳ Change in probability of DEP attrition:

GMB: -10%
GFA: +25%
SMA: +23%
SMB: +35%
SFA: +107%
SFB: +86%
+1 month Time in DEP: +15%
Not Tier 1:   +16%
Hispanic: -13%
4th Quarter: -6%
*correlated w/ rising unemployment

Married: -31%
Dependents: +10%
Last week of RSM: +11%
Last day of RSM: +14%
9-11-01 Effect*:   -2%
1 year older: +5%
1-2 years College: -28%
College Grad: -30%
BMI <18:   +22%
Non-citizen: -16%

1% increase unemployment: -2%
1st BDE: 0% (base case)
2d BDE: +11%
3rd BDE: -6%
5th BDE: -10%
6th BDE: -10%

✳ What we know:

- ▯ Multiple reasons why an individual recruit attrits but management information systems capture only one reason (AAA, ARI)
- ▯ Categories are fungible & statistics not exact (AMSARA, AAA, ARI)
- ▯ Significant overlap between EPTS & Other Medical categories (AMSARA)
- ▯ Minimal overlap between medical & ELS administrative categories (AMSARA)
- ▯ EPTS discharge rate increasing (data)
- ▯ Recruits & Army venue shop for most expeditious discharge (ARI)
- ▯ Few recruits attrit for BRM failure, EOCT failure, APFT failure (data)
- ▯ Sensitivity: must address EPTS & ELS Failure To Adapt to meet goal of 12% attrition

% Attrition Reduction	EPTS	ELS Failure to Adapt	Other Medical Disqualifications	ELS Lack of Motivation	ELS APFT Failure	Unsat Performance	Misconduct	Misc Categories	All Attrition Categories
5%	13.3%	13.4%	13.5%	13.6%	13.6%	13.6%	13.6%	13.5%	12.9%
10%	13.0%	13.2%	13.5%	13.6%	13.6%	13.5%	13.6%	13.5%	12.2%
15%	12.7%	13.1%	13.4%	13.5%	13.5%	13.5%	13.5%	13.4%	11.6%
20%	12.4%	12.9%	13.4%	13.5%	13.5%	13.5%	13.5%	13.3%	10.9%
25%	12.1%	12.7%	13.3%	13.5%	13.5%	13.5%	13.5%	13.3%	10.2%
30%	11.8%	12.5%	13.2%	13.5%	13.5%	13.4%	13.5%	13.2%	9.5%
40%	11.3%	12.2%	13.1%	13.5%	13.5%	13.4%	13.4%	13.1%	8.2%
50%	10.7%	11.8%	13.0%	13.4%	13.4%	13.3%	13.4%	12.9%	6.8%
75%	9.2%	10.9%	12.7%	13.3%	13.3%	13.2%	13.3%	12.6%	3.4%
100%	7.8%	10.0%	12.4%	13.3%	13.2%	13.1%	13.2%	12.3%	0.0%
attrits per 100 recruits	5.8	3.6	1.2	0.3	0.4	0.5	0.4	1.3	13.6
% of IET Attrition	43.0%	26.5%	8.7%	2.5%	2.7%	3.8%	3.0%	9.8%	100.0%

<12%

FY03 IET Attrition Categories by Gender

* **Comparing female recruits to male recruits:**
  * ➡ **Twice as likely as males to attrit from IET**
  * **Twice as likely as males to attrit for EPTS and ELS failure to Adapt**
  * **Three times as likely as males to attrit for Other Medical**
  * **Five times as likely as males to attrit for APFT failure**
  * **Few attrits due to pregnancy (<1 per 100 females)**
  * **Access with lower initial fitness (CHPPM)**
  * **Twice as likely as males to be injured in BCT (CHPPM)**

% Attrition Reduction	EPTS	ELS Failure to Adapt	Other Medical Disqualifications	ELS Lack of Motivation	ELS APFT Failure	Unsat Performance	Misconduct	Pregnancy	Misc. Categories	All Attrition Categories
Male (82.2%)	45.0%	27.0%	7.3%	2.2%	2.1%	3.9%	4.4%	0.0%	8.1%	11.3%
Female (18.8%)	38.6%	25.5%	11.8%	3.0%	4.2%	3.7%	1.7%	3.1%	8.4%	23.4%
Total	43.0%	26.5%	8.7%	2.5%	2.7%	3.8%	3.6%	1.0%	8.2%	13.6%
attrits per 100 males	5.1	3.1	0.8	0.2	0.2	0.4	0.5	0.0	0.9	11.3
attrits per 100 females	9.0	6.0	2.8	0.7	1.0	0.9	0.4	0.7	2.0	23.4

Unit Attrition – Top 5 Loss Categories

Loss Category	FY1999
MISCONDUCT	30%
PHYSICAL DISABILITY	12%
PREGNANCY	10%
WEIGHT CONTROL	7%
UNSAT PERF	7%

Loss Category	FY2000
MISCONDUCT	30%
PHYSICAL DISABILITY	13%
PREGNANCY	11%
WEIGHT CONTROL	5%
PHYSICAL (NOT DIS)	5%

Loss Category	FY2001
MISCONDUCT	32%
PREGNANCY	11%
PHYSICAL DISABILITY	10%
PHYSICAL (NOT DIS)	6%
PERS DISORDER	5%

Loss Category	FY2002
MISCONDUCT	34%
PREGNANCY	10%
PHYSICAL DISABILITY	9%
ILO CM/GOOD OF SERV	7%
PHYSICAL (NOT DIS)	6%

Loss Category	FY2003
MISCONDUCT	38%
PREGNANCY	9%
PHYSICAL DISABILITY	9%
PHYSICAL (NOT DIS)	6%
ILO CM/GOOD OF SERV	6%

Who can Help?
- **TJAG (Misconduct)**
- **OTSG (Physical)**
- **HR (Weight Control)**
- **Leaders (Unsat Perf/Misconduct)**

Air Force Recruit Psychological Screening Program

* **Biographical Screening of Troops (BEST) program**
* **3 phase screening procedure to identify trainees at risk for mental health problems--administered post-accession during BCT inprocessing**
  * **Phase I: Self-report test of biographic information**
  * **Phase II: Computer based biographic information test & interview by mental health technician.**
  * **Phase III: Interview by clinical psychologist or psychiatrist**
  * **2% of FY02 trainees screened at Phase III (865 of 43K)**
  * **.2% of FY02 trainees discharged (93 of 42,995)**
* **Navy discontinued use of similar psychological screening program in Jan 2001 due to concerns of high false positive rate**
* **Only 20% of recruits referred for psychological treatment are identified using the BEST screen (20% sensitivity)**

Phase/Event	Trainees	% of Phase
Phase I Test	42,995	
Phase II Test Required	5647	13%
Total Phase II	5647	
Phase II Return To Duty	4449	79%
Phase III referral	865	15%
BEST not complete	264	5%
Hospitalized, psychiatric	6	0%
Hospitalized, medical	2	0%
Special counseling	61	1%
Total Phase III	865	
Phase III Return to Duty	203	23%
Not seen in Phase III-RTD	546	63%
RTD without PRP	15	2%
Recommended for Discharge	93	11%
Hospitalized	8	1%

Pre-accession Attrition Screen Hypothetical Scenarios

Scenario	Percent Natural Attrition	Sensitivity of Test % Correct ID of Attriters	Specificity of Test % Correct ID of Non-Attriters	Cost per pre-accession Test	Number of Tests/ required applicants	Number of Attriters	Number of Attriters Screened	Number of Falsely Screened Applicants (non-attriters)	Number of Accessions	Training Cost per Trainee	Training Attriters	Screening Costs ($K) (less recruiting)	Total Costs ($M) (less recruiting)	Percent Training Attrition	Trained Output
No Screen	10%	N/A	N/A	0	0	11	N/A	N/A	111	5000	11	N/A	0.56	9.9%	100
No Screen	15%	N/A	N/A	0	0	18	N/A	N/A	118	5000	18	N/A	0.59	15.3%	100
No Screen	20%	N/A	N/A	0	0	25	N/A	N/A	125	5000	25	N/A	0.63	20.0%	100
Scenario 1	10%	0.25	0.85	100	131	13	3	18	110	5000	10	13.10	0.56	9.1%	100
Scenario 2	10%	0.5	0.9	100	123	12	6	11	106	5000	6	12.28	0.54	5.7%	100
Scenario 3	10%	0.75	0.95	100	117	12	9	5	103	5000	3	11.65	0.53	2.9%	100
Scenario 4	15%	0.25	0.85	100	139	21	5	18	116	5000	16	13.91	0.59	13.8%	100
Scenario 5	15%	0.5	0.9	100	131	20	10	11	110	5000	10	13.08	0.56	9.1%	100
Scenario 6	15%	0.75	0.95	100	124	19	14	5	105	5000	5	12.40	0.54	4.8%	100
Scenario 7	20%	0.25	0.85	100	148	30	8	18	122	5000	22	14.79	0.62	18.0%	100
Scenario 8	20%	0.5	0.9	100	139	28	14	11	114	5000	14	13.91	0.58	12.3%	100
Scenario 9	20%	0.75	0.95	100	131	26	20	5	106	5000	6	13.12	0.54	5.7%	100

Tangible Benefit Intangible Cost   Tangible Cost   Intangible Benefit

✸ Utility of pre-accession screening

⇒ **Tangible & intangible costs: screening cost, ill-will caused by screening out non-attriters**

▫ **Tangible & intangible benefits: lower total training costs, lower IET attrition, increased job performance**

▫ **Screen has positive utility & should be used if *all* benefits outweigh all costs**

▫ ***Scenario 4* versus *No Screen*: Lower IET attrition from 15.3% to 13.8% by screening 139 applicants, including screening out 18 applicants who would have completed IET, at a cost of $14K**

▫ **Need to "recruit" 139 versus 118 otherwise fully qualified applicants (+18%)**

IET High Attrition Risk Demographic Profile

✴ Data

➡ **144K sample of RA non-prior service soldiers who assessed between October 2000 and Oct 2002**

☐ *Sample* **IET attrition rate of 19.5%**

☐ **6 way (variable) categories where sample size >50**

☐ **Ranked highest attrition risk to lower risk**

✴ Conclusions

☐ **Most high attrition risk groups are low-density**

☐ **Must screen out significant number of high attrition risk applicants to appreciably reduce attrition**

☐ **Large number of applicants who would have probably completed IET would be screened out**

☐ **Screen or intervene?**

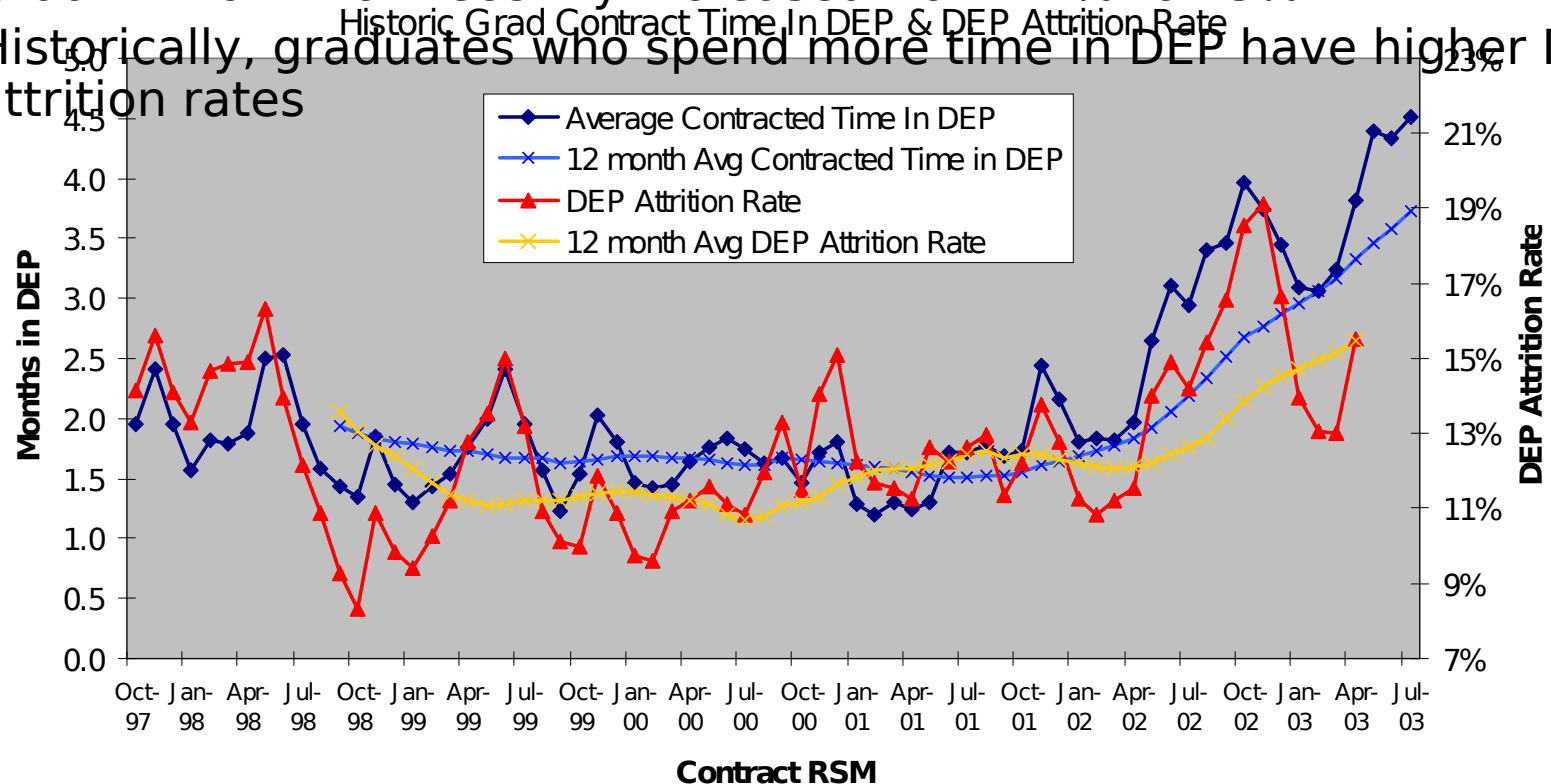| Gender	Race	Tier 1	Age	Body Mass Index	Test Score Category	Sample Size	IET Graduates	% IET Attrition	% of Sample	% IET Attrition w/screen	% Current Applicants Screened Out	% Current Applicants Falsely Screened
F	CAUC	tier2	>26 years	>90% BMI	TSC I-IIIA	52	22	57.7%	0.04%	19.5%	0.0%	0.0%
F	CAUC	tier2	19-26 yrs	>90% BMI	TSC I-IIIA	82	41	50.0%	0.06%	19.5%	0.1%	0.0%
F	CAUC	tier2	<19 years	Low BMI	TSC B/IV	171	93	45.6%	0.13%	19.5%	0.2%	0.1%
F	CAUC	tier2	19-26 yrs	Low BMI	TSC I-IIIA	828	459	44.6%	0.62%	19.3%	0.8%	0.5%
F	CAUC	tier2	>26 years	Low BMI	TSC I-IIIA	163	91	44.2%	0.12%	19.3%	1.0%	0.5%
F	CAUC	tier2	<19 years	Low BMI	TSC I-IIIA	440	247	43.9%	0.33%	19.2%	1.3%	0.7%
F	CAUC	tier1	>26 years	>90% BMI	TSC B/IV	54	31	42.6%	0.04%	19.2%	1.3%	0.7%
F	CAUC	tier2	19-26 yrs	Low BMI	TSC B/IV	238	140	41.2%	0.18%	19.2%	1.5%	0.8%
F	CAUC	tier1	>26 years	Low BMI	TSC B/IV	165	99	40.0%	0.12%	19.1%	1.6%	0.9%
F	AA	tier2	19-26 yrs	>90% BMI	TSC I-IIIA	51	31	39.2%	0.04%	19.1%	1.7%	0.9%
M	CAUC	tier1	>26 years	>90% BMI	TSC B/IV	119	73	38.7%	0.09%	19.1%	1.8%	1.0%
F	CAUC	tier1	19-26 yrs	>90% BMI	TSC I-IIIA	448	277	38.2%	0.34%	19.0%	2.1%	1.2%
M	CAUC	tier2	<19 years	>90% BMI	TSC B/IV	64	40	37.5%	0.05%	19.0%	2.2%	1.2%
F	CAUC	tier1	19-26 yrs	>90% BMI	TSC B/IV	148	93	37.2%	0.11%	19.0%	2.3%	1.3%
F	CAUC	tier1	>26 years	Low BMI	TSC I-IIIA	628	395	37.1%	0.47%	18.9%	2.7%	1.6%
M	CAUC	tier1	>26 years	>90% BMI	TSC I-IIIA	180	115	36.1%	0.14%	18.9%	2.9%	1.7%
M	CAUC	tier2	>26 years	Low BMI	TSC B/IV	181	117	35.4%	0.14%	18.9%	3.0%	1.8%
F	CAUC	tier1	>26 years	>90% BMI	TSC I-IIIA	165	110	33.3%	0.12%	18.9%	3.1%	1.9%
M	CAUC	tier2	19-26 yrs	>90% BMI	TSC B/IV	148	99	33.1%	0.11%	18.8%	3.2%	1.9%
M	AA	tier2	19-26 yrs	>90% BMI	TSC B/IV	76	51	32.9%	0.06%	18.8%	3.3%	2.0%
F	CAUC	tier1	<19 years	>90% BMI	TSC I-IIIA	162	109	32.7%	0.12%	18.8%	3.4%	2.0%
F	AA	tier2	<19 years	Low BMI	TSC B/IV	74	50	32.4%	0.06%	18.8%	3.5%	2.1%
F	CAUC	tier1	19-26 yrs	Low BMI	TSC I-IIIA	3767	2554	32.2%	2.83%	18.4%	6.3%	4.0%
F	CAUC	tier1	19-26 yrs	Low BMI	TSC B/IV	1570	1084	31.0%	1.18%	18.2%	7.5%	4.8%
M	CAUC	tier1	>26 years	>90% BMI	TSC I-IIIA	578	401	30.6%	0.43%	18.2%	7.9%	5.1%
F	HISP	tier2	19-26 yrs	Low BMI	TSC I-IIIA	105	73	30.5%	0.08%	18.2%	8.0%	5.2%
M	CAUC	tier2	<19 years	>90% BMI	TSC I-IIIA	197	137	30.5%	0.15%	18.2%	8.1%	5.3%
M	CAUC	tier2	19-26 yrs	>90% BMI	TSC I-IIIA	636	447	29.7%	0.48%	18.1%	8.6%	5.6%
M	CAUC	tier2	>26 years	Low BMI	TSC I-IIIA	957	677	29.3%	0.72%	18.0%	9.3%	6.1%
F	AA	tier1	<19 years	>90% BMI	TSC I-IIIA	65	46	29.2%	0.05%	18.0%	9.4%	6.2%
M	CAUC	tier1	>26 years	Low BMI	TSC I-IIIA	3058	2178	28.8%	2.29%	17.7%	11.7%	7.8%
M	AA	tier2	>26 years	Low BMI	TSC B/IV	101	72	28.7%	0.08%	17.7%	11.8%	7.8%
F	CAUC	tier1	<19 years	Low BMI	TSC B/IV	991	712	28.2%	0.74%	17.6%	12.5%	8.4%
F	CAUC	tier1	<19 years	Low BMI	TSC I-IIIA	2494	1795	28.0%	1.87%	17.4%	14.4%	9.7%
F	AA	tier2	<19 years	Low BMI	TSC I-IIIA	105	76	27.6%	0.08%	17.4%	14.4%	9.8%
F	HISP	tier1	19-26 yrs	>90% BMI	TSC I-IIIA	60	44	26.7%	0.05%	17.4%	14.5%	9.8%
M	CAUC	tier1	19-26 yrs	Low BMI	TSC B/IV	2084	1541	26.1%	1.56%	17.2%	16.1%	11.0%
F	AA	tier1	>26 years	>90% BMI	TSC B/IV	113	84	25.7%	0.08%	17.2%	16.1%	11.0%
F	AA	tier1	>26 years	>90% BMI	TSC I-IIIA	157	117	25.5%	0.12%	17.2%	16.3%	11.1%
M	CAUC	tier2	<19 years	Low BMI	TSC B/IV	1171	881	24.8%	0.88%	17.1%	17.1%	11.8%
M	CAUC	tier1	19-26 yrs	>90% BMI	TSC B/IV	867	654	24.6%	0.65%	17.1%	17.8%	12.3%
M	CAUC	tier2	<19 years	Low BMI	TSC I-IIIA	3835	2901	24.4%	2.88%	16.8%	20.7%	14.4%

• Screening out top 10% highest risk recruits reduces sample attrition by 7.5% (from 19.5% rate to 18.0% rate)
• 2/3s of applicants "screened out" were falsely screened out & did complete IET

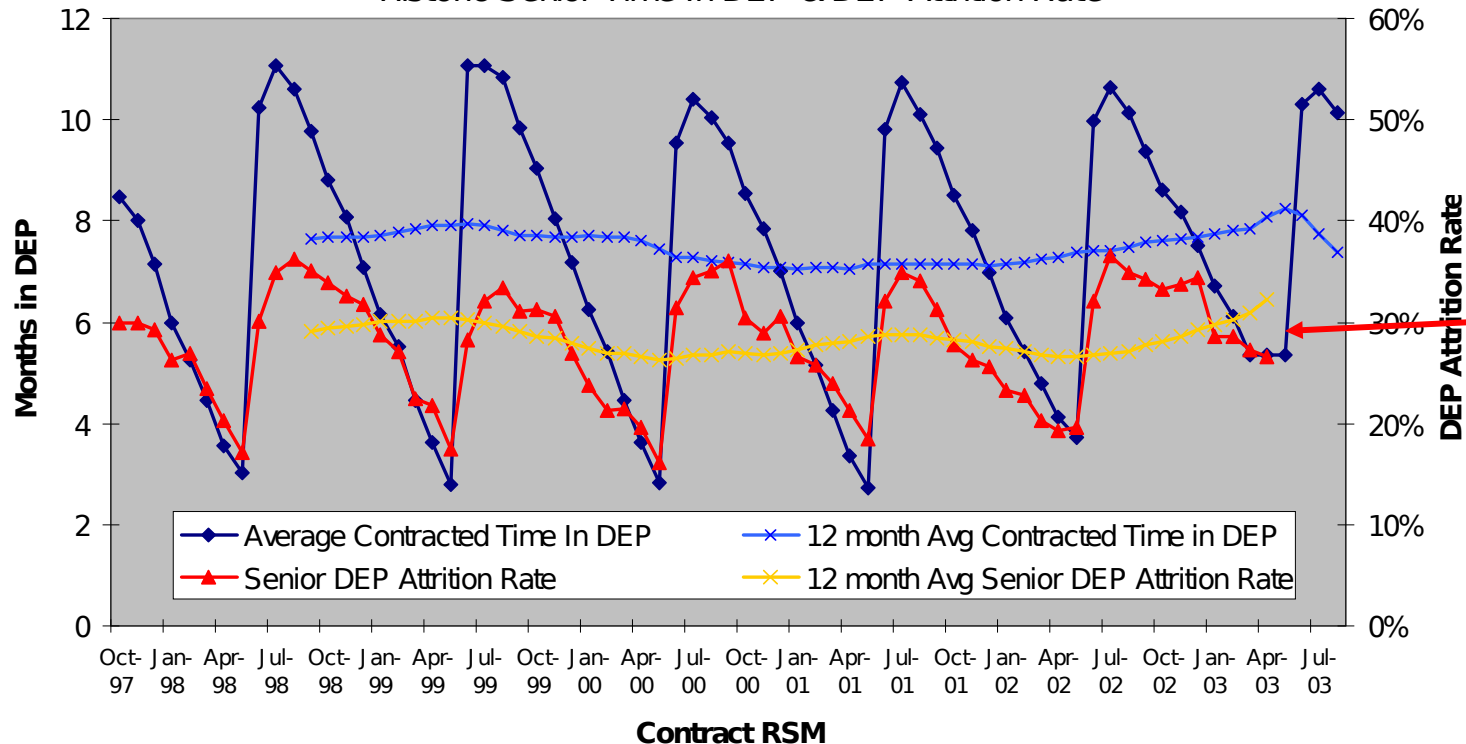✳ Graduate contracted time in DEP and DEP attrition rates

➡ Annual avg. graduate contracted time in DEP increased from 1.5 to 3.5 months

🗌 In July '03 average grad contracted to wait 4.5 months to ship

🗌 In August '03 average grad contracted to wait 4.5 months to ship

🗌 Grad DEP attrition recently increased from 11% to 15%

🗌 Historically, graduates who spend more time in DEP have higher DEP attrition rates

Historic Grad Contract Time In DEP & DEP Attrition Rate

Legend:
- Average Contracted Time In DEP
- 12 month Avg Contracted Time in DEP
- DEP Attrition Rate
- 12 month Avg DEP Attrition Rate

Y-axis (left): Months in DEP
Y-axis (right): DEP Attrition Rate
X-axis: Contract RSM (Oct-97 through Jul-03)

Senior Historic Contracted Time In DEP

✴ Senior contracted time in DEP and DEP attrition rates are seasonal & stable

➡ Small increase in Time In DEP & no increase in DEP attrition

➡ Average Senior historically contracts for 8 months in DEP

▯ Seniors who contract early (1st QTR) have higher DEP attrition rates

Historic Senior Time In DEP & DEP Attrition Rate

Legend:
- Average Contracted Time In DEP
- 12 month Avg Contracted Time in DEP
- Senior DEP Attrition Rate
- 12 month Avg Senior DEP Attrition Rate

X-axis: Contract RSM — Oct-97, Jan-98, Apr-98, Jul-98, Oct-98, Jan-99, Apr-99, Jul-99, Oct-99, Jan-00, Apr-00, Jul-00, Oct-00, Jan-01, Apr-01, Jul-01, Oct-01, Jan-02, Apr-02, Jul-02, Oct-02, Jan-03, Apr-03, Jul-03

Left Y-axis: Months in DEP (0–12). Right Y-axis: DEP Attrition Rate (0%–60%)

Seniors still in DEP-- DEP attrition will increase as Seniors attrit & DEP loss occurs near ship month

Demographic Profile of RY2002 DEP Loss

✴ Compared to a contract that assesses, a DEP loss contract is more likely to be:

➡ High School Senior

⬜ Female

⬜ Longer Time In DEP

⬜ Younger

⬜ Not married

⬜ No dependents

⬜ Lower AFQT

⬜ Tier 1 (HSDG)

⬜ African American

⬜ Contracted last day of the RSM

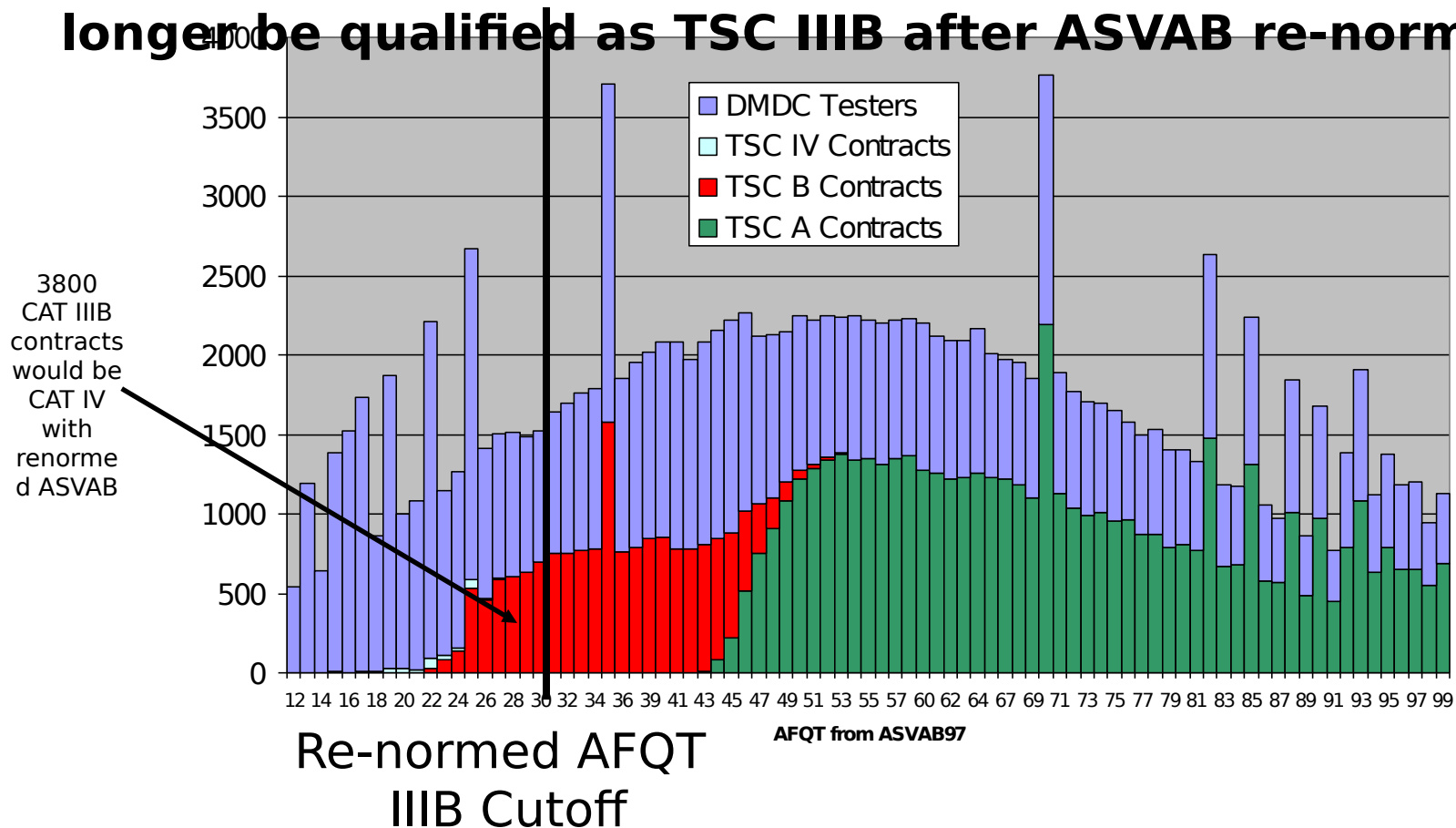|	RY 2002 DEP Loss	RY 2002 Assess	RY 2002 Average
Count	15861	85642	101503
Seniors	32.2%	15.4%	18.0%
Grads	54.3%	65.4%	63.7%
GMA	25.9%	35.7%	34.2%
GMB	10.3%	15.4%	14.6%
GFA	11.4%	8.0%	8.5%
GFB	6.0%	5.0%	5.2%
SMA	15.4%	9.1%	10.1%
SMB	6.7%	3.5%	4.0%
SFA	6.2%	1.8%	2.4%
SFB	3.9%	1.1%	1.5%
Other NBOX	14.1%	20.4%	19.4%
Prior Service	4.0%	7.7%	7.1%
Age	20.8	21.5	21.4
Married	11.8%	17.7%	16.8%
w/dependents	13.8%	20.2%	19.2%
Unemployment rate	5.66	5.67	5.63
Female	29.8%	18.2%	20.0%
Caucasian	63.8%	64.9%	64.7%
African American	20.2%	17.8%	18.2%
Hispanic	12.5%	12.9%	12.9%
Other minority	3.4%	4.4%	4.3%
BMI	24.5	24.5	24.5
High BMI	15.0%	17.0%	16.7%
Tier 1	90.1%	87.8%	88.2%
AFQT	59.2	60.1	60.0
TSC As	69.9%	69.6%	69.6%
TSC Bs	29.3%	28.8%	28.8%
CA	28.4%	33.9%	33.0%
CS	31.1%	28.2%	28.6%
CSS	40.5%	38.0%	38.4%
Reno	15.0%	9.0%	9.9%
Last week of RSM	43.9%	47.6%	47.1%
Last Day of RSM	16.0%	12.2%	12.8%
DEP Attrition			15.6%

Historic DEP Attrition Rates

✴ Average DEP attrition rates

- Contract data from RSM April 2000 through RSM April 2003
- Raw rates--*not controlling for other factors*
- Seniors (27.8%) have higher DEP attrition rates than Grads (13.1%)
- Females (23.7%) have higher DEP attrition rates than males (15%)
- Longer time in DEP correlated to increased DEP attrition rate. Each additional month in DEP averages a 3% increase in DEP attrition rate

NBOX	Average	1 Month	2 Month	3 Month	4 Month	5 Month	6 Month	7 Month	8 Month	9 Month	10 Month	11 Month	12 Month
Grads	**13.1%**	7.0%	10.8%	13.6%	17.9%	24.0%	30.6%	31.2%	36.4%	36.8%	37.8%	35.4%	34.7%
Seniors	**27.8%**	20.1%	11.9%	15.2%	19.6%	22.0%	25.3%	27.1%	29.2%	31.7%	33.0%	36.8%	36.0%
Males	**15.0%**	8.2%	10.1%	12.6%	16.2%	20.3%	24.1%	24.4%	26.4%	28.0%	28.2%	33.0%	31.7%
Females	**23.7%**	9.7%	13.5%	19.3%	25.1%	28.9%	35.5%	39.6%	42.9%	44.4%	48.8%	48.7%	50.4%
Alphas	**17.2%**	8.5%	10.7%	13.6%	17.8%	22.9%	27.2%	28.0%	29.5%	31.0%	32.2%	35.6%	34.6%
Bravos	**16.4%**	8.5%	11.2%	14.3%	19.2%	24.3%	29.4%	29.9%	34.3%	35.8%	36.6%	39.4%	39.7%
GFA	**19.8%**	8.8%	13.6%	19.3%	24.8%	30.7%	36.5%	38.7%	46.3%	48.2%	56.1%	48.2%	54.7%
GFB	**16.4%**	8.3%	13.4%	19.3%	24.5%	26.9%	37.1%	51.2%					
GMA	**11.9%**	7.6%	10.0%	12.2%	15.7%	19.6%	25.9%	26.0%	30.7%	29.9%	27.9%	33.5%	31.5%
GMB	**10.9%**	7.9%	10.3%	12.6%	16.0%	23.7%	28.5%	25.7%					
OTH	**11.9%**	8.0%	12.4%	16.5%	18.7%	27.4%	31.8%	35.3%					
SFA	**39.0%**	30.0%	12.4%	20.0%	26.2%	28.0%	33.8%	39.5%	39.8%	42.8%	47.6%	49.8%	50.0%
SFB	**37.1%**	25.4%	14.8%	19.4%	26.9%	27.7%	33.7%	36.6%	44.1%	44.7%	48.2%	47.7%	51.5%
SMA	**24.1%**	18.4%	11.4%	13.9%	16.9%	20.3%	22.1%	23.5%	24.1%	26.5%	27.1%	31.5%	30.3%
SMB	**25.9%**	15.7%	11.6%	14.4%	19.1%	19.8%	23.6%	24.9%	29.2%	31.3%	31.4%	37.0%	36.4%
Average	**16.0%**	**8.3%**	**11.2%**	**14.3%**	**18.3%**	**23.8%**	**28.0%**	**28.6%**	**30.9%**	**32.5%**	**33.4%**	**36.7%**	**35.9%**

Test Score Category Comparison

* **Compare Test Score Category (TSC) contracts for $ASVAB_{80}$ versus $ASVAB_{97}$**

* **DMDC 158K first-time test takers and 70K Army contracts displayed with AFQT from $ASVAB_{97}$**

* **25% of current $ASVAB_{80}$ TSC IIIB contracts would no longer be qualified as TSC IIIB after ASVAB re-norming**

3800 CAT IIIB contracts would be CAT IV with renormed ASVAB

Legend:
- DMDC Testers
- TSC IV Contracts
- TSC B Contracts
- TSC A Contracts

AFQT from ASVAB97

Re-normed AFQT IIIB Cutoff

Test Score Category Comparison (cont.)

* **Compare Test Score Category (TSC) for ASVAB$_{80}$ versus ASVAB$_{97}$**
* **25% of current ASVAB$_{80}$ TSC IIIB contracts would no longer be qualified as TSC IIIB after ASVAB re-norming**
* **Assume all applicants in DMDC data-base who contracted with Army using AFQT from ASVAB$_{80}$ would also have been allowed to contract with AFQT from ASVAB$_{97}$**
* **TSC Category IV increases from .4% to 5.8% (FY2002-FY2003)**
* **Re-weighting for FY1998-FY2003, TSC Category IV increases from 1.5% to 8.3%**

DMDC Data (70K)	IV	IIIB	I-IIIA
ASVAB$_{80}$ TSC	0.4%	23.8%	75.7%
ASVAB$_{97}$ TSC	5.8%	23.4%	70.8%

Estimate for FY2002-FY2003

Resampled DMDC Data	IV	IIIB	I-IIIA
ASVAB$_{80}$ TSC	1.5%	30.1%	68.4%
ASVAB$_{97}$ TSC	8.3%	27.8%	63.9%

Estimate for FY1998-FY2003

IET Attrition Study
POC: MAJ Piskator

✳ **Enlisted Attrition Reduction Strategy Qualitative Assessment**

  ✳ **Quick, qualitative assessment & sensitivity analysis of ability to reach USAAC goal of 12% IET attrition**
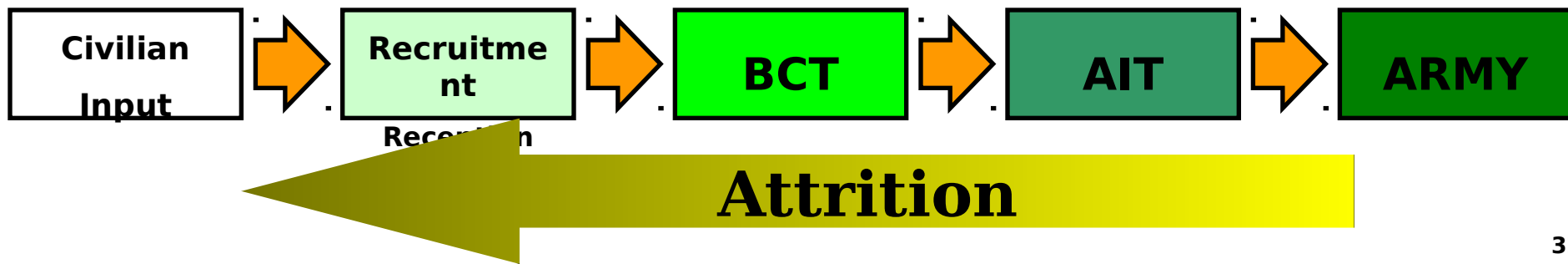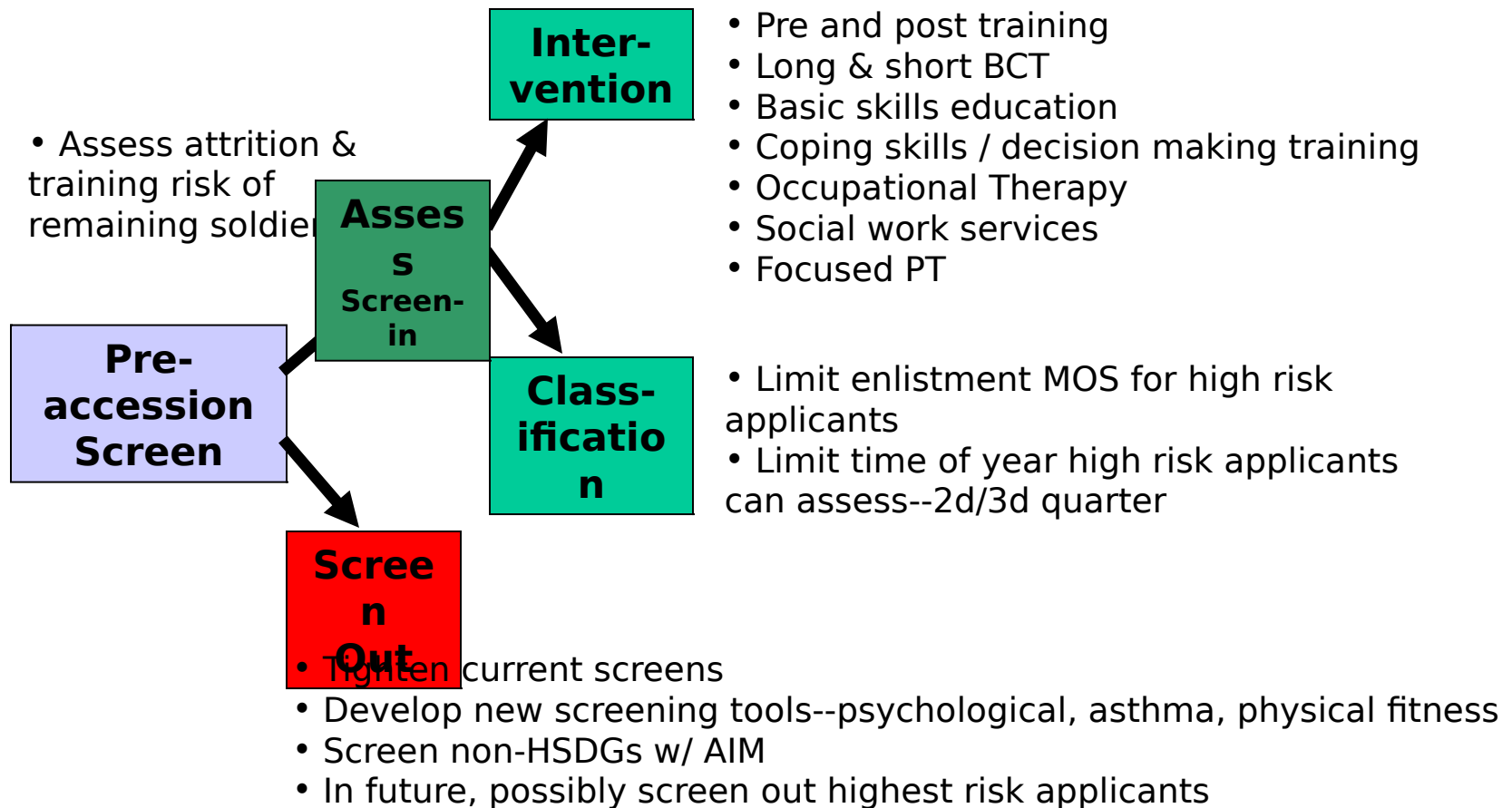
  ✳ **Uses ATRRS attrition reason codes data**

% Attrition Reduction	EPTS	ELS Failure to Adapt	Other Medical Disqualifications	ELS Lack of Motivation	ELS APFT Failure	Unsat Performance	Misconduct	Misc. Categories	All Attrition Categories
5%	13.3%	13.4%	13.5%	13.6%	13.6%	13.6%	13.6%	13.5%	12.9%
10%	13.0%	13.2%	13.5%	13.6%	13.6%	13.5%	13.6%	13.5%	12.2%
15%	12.7%	13.1%	13.4%	13.5%	13.5%	13.5%	13.5%	13.4%	11.6%
20%	12.4%	12.9%	13.4%	13.5%	13.5%	13.5%	13.5%	13.3%	10.9%
25%	12.1%	12.7%	13.3%	13.5%	13.5%	13.5%	13.5%	13.3%	10.2%
30%	11.8%	12.5%	13.2%	13.5%	13.5%	13.4%	13.5%	13.2%	9.5%
40%	11.3%	12.2%	13.1%	13.5%	13.5%	13.4%	13.4%	13.1%	8.2%
50%	10.7%	11.8%	13.0%	13.4%	13.4%	13.3%	13.4%	12.9%	6.8%
75%	9.2%	10.9%	12.7%	13.3%	13.3%	13.2%	13.3%	12.6%	3.4%
100%	7.8%	10.0%	12.4%	13.3%	13.2%	13.1%	13.2%	12.3%	0.0%
attrits per 100 recruits	5.8	3.6	1.2	0.3	0.4	0.5	0.4	1.3	13.6
% of IET Attrition	43.0%	26.5%	8.7%	2.5%	2.7%	3.8%	3.0%	9.8%	100.0%

<12%

✳ **ATC-FJ Physical Training Pilot Study**

  ✳ **Tested ability of progressive, prescriptive, BCT PT program to reduce injury & attrition while improving APFT performance**

Attrition Reduction Policy Courses Of Action

- Mix of screening, assessment & interventions

Inter-vention

- Pre and post training
- Long & short BCT
- Basic skills education
- Coping skills / decision making training
- Occupational Therapy
- Social work services
- Focused PT

- Assess attrition & training risk of remaining soldiers

Assess
Screen-in

Pre-accession Screen

Class-ification

- Limit enlistment MOS for high risk applicants
- Limit time of year high risk applicants can assess--2d/3d quarter

Screen Out

- Tighten current screens
- Develop new screening tools--psychological, asthma, physical fitness
- Screen non-HSDGs w/ AIM
- In future, possibly screen out highest risk applicants

| Civilian Input | → | Recruitment | → | BCT | → | AIT | → | ARMY |

Attrition

Historic DEP Composition

✳ DEP composition by mission box at end of RSM

➡ DEP composition affected by contract type & length of time in DEP

▯ Grad & Senior composition is seasonal

▯ Recent pronounced increase in Grads and decrease in Seniors
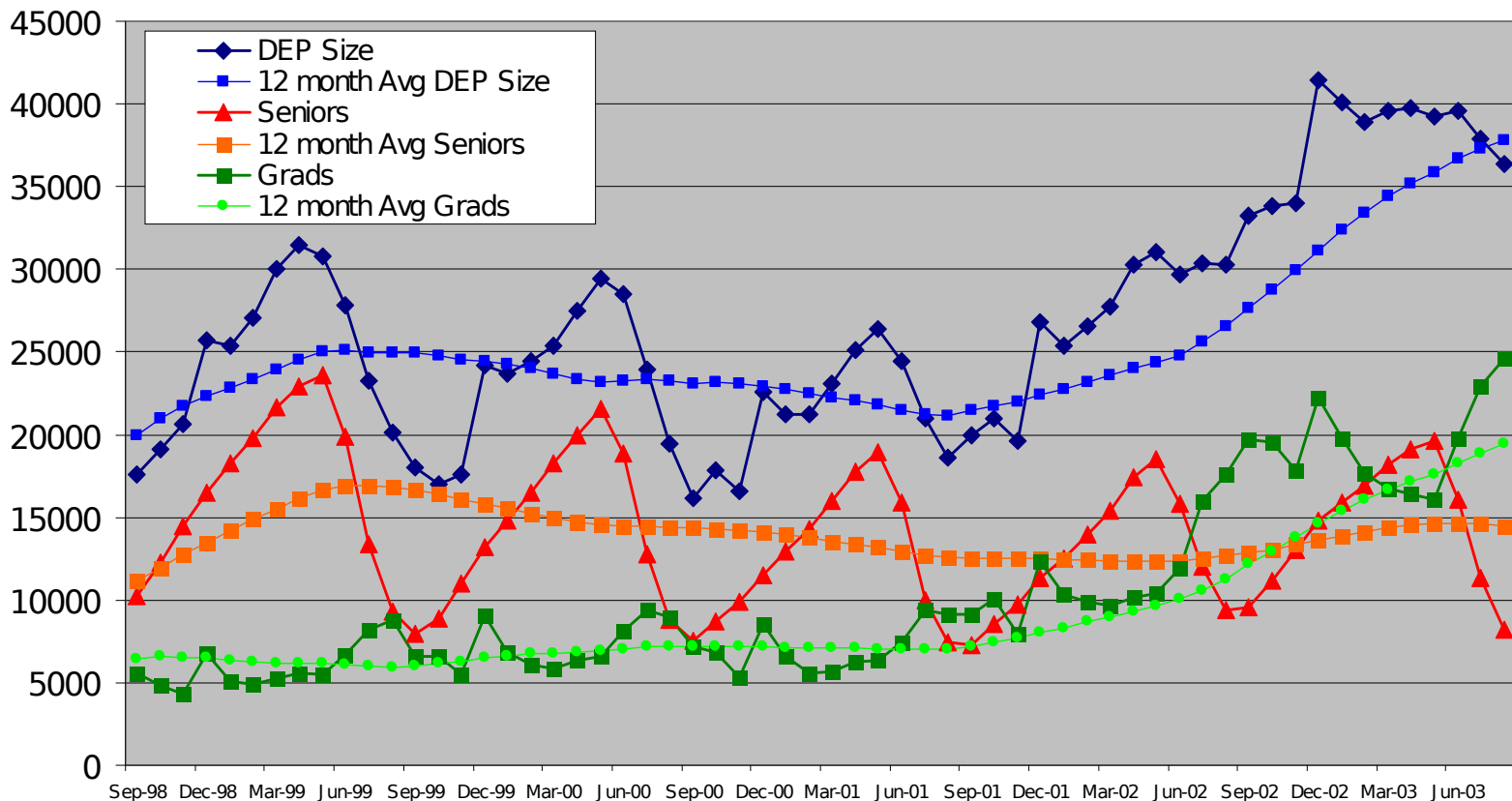
DEP Loss Rates & DEP Attrition Rates

* Attrition based DEP *Attrition* Rate
  * Of the 100 contracts for the RSM there were *eventually* 10 DEP losses (10% rate)
  * Can only be measured after all contracts either ship or DEP loss
* Production based DEP *Loss* Rate
  * Of the 100 contracts produced for the RSM there were 10 DEP losses this month contracted from previous months (10% rate)
  * Biased by monthly production

Period 1	Period 2	Period 3	Period 4
Produced 100 contracts	Produced 100 contracts	Produced 50 contracts	Produced 100 contracts
10% "true" DEP attrition	Realizes 10 losses	Realizes 10 losses	Realizes 5 losses
(10 contracts)	from Period 1	from Period 2	from Period 2
All losses counted	10% DEP Loss	20% DEP Loss	5% DEP Loss
in next period	10% DEP Attrition	10% DEP Attrition	10% DEP Attrition